

STN - Search  
Do NOT Remove

Uploading C:\Program Files\Stnexp\Queries\098346391-1.str

L1 STRUCTURE UPLOADED

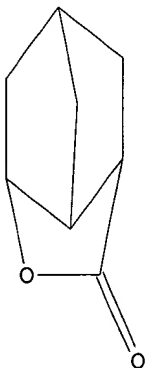
=> que L1

L2 QUE L1

=> d

L2 HAS NO ANSWERS

L1 STR



I-1

Structure attributes must be viewed using STN Express query preparation.

L2 QUE ABB=ON PLU=ON L1

=> s l2

SAMPLE SEARCH INITIATED 13:29:11 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 5051 TO ITERATE

19.8% PROCESSED 1000 ITERATIONS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

9 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 96761 TO 105279

PROJECTED ANSWERS: 505 TO 1313

L3 9 SEA SSS SAM L1

=> d l3

L3 ANSWER 1 OF 9 REGISTRY COPYRIGHT 2002 ACS

RN 460096-52-0 REGISTRY

CN INDEX NAME NOT YET ASSIGNED

MF (C18 H28 O2 . C14 H20 O3 . C12 H14 O4)x

CI PMS

PCT Polyacrylic

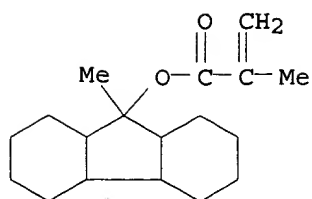
SR CA

LC STN Files: CAPLUS

CM 1

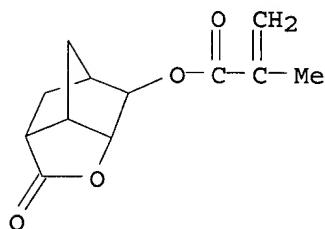
CRN 460096-50-8

CMF C18 H28 O2



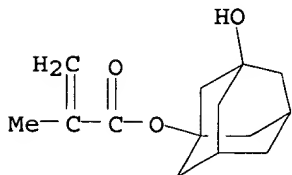
CM 2

CRN 254900-07-7  
CMF C12 H14 O4



CM 3

CRN 115372-36-6  
CMF C14 H20 O3



1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

=> FIL USPATFULL CAPLUS HCAPLUS  
COST IN U.S. DOLLARS

| SINCE FILE ENTRY | TOTAL SESSION |
|------------------|---------------|
| 1.96             | 2.17          |

FULL ESTIMATED COST

FILE 'USPATFULL' ENTERED AT 13:29:37 ON 10 OCT 2002  
CA INDEXING COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'CAPLUS' ENTERED AT 13:29:37 ON 10 OCT 2002  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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FILE 'HCAPLUS' ENTERED AT 13:29:37 ON 10 OCT 2002  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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=> d his

(FILE 'HOME' ENTERED AT 13:28:23 ON 10 OCT 2002)

FILE 'REGISTRY' ENTERED AT 13:28:51 ON 10 OCT 2002

L1 STRUCTURE UPLOADED  
L2 QUE L1  
L3 9 S L2

FILE 'USPATFULL, CAPLUS, HCAPLUS' ENTERED AT 13:29:37 ON 10 OCT 2002

=> s l3  
L4 22 L3

=> s l4 and (resist or photoresist)  
L5 12 L4 AND (RESIST OR PHOTORESIST)

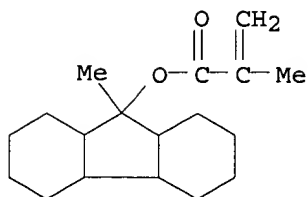
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HIDE IS NOT A RECOGNIZED COMMAND  
The previous command name entered was not recognized by the system.  
For a list of commands available to you in the current file, enter  
"HELP COMMANDS" at an arrow prompt (=>).

=> duplicate  
ENTER REMOVE, IDENTIFY, ONLY, OR (?):remove  
ENTER L# LIST OR (END):15  
DUPLICATE PREFERENCE IS 'USPATFULL, CAPLUS, HCAPLUS'  
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n  
PROCESSING COMPLETED FOR L5  
L6 7 DUPLICATE REMOVE L5 (5 DUPLICATES REMOVED)

=> d l6 1-7 ibib abs hitstr

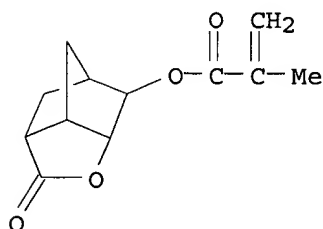
L6 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1  
ACCESSION NUMBER: 2002:708833 CAPLUS  
TITLE: Chemical compounds for **photoresists** and  
resin compositions for **photoresists**  
INVENTOR(S): Tsutsumi, Kiyoharu; Itokazu, Teruo  
PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

|     | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|-----|--|------|----------|-----------------|----------|
|     | JP 2002265530  | A2   | 20020918 | JP 2001-62435   | 20010306 |
| AB  | The compds. are 2-(meth)acryloyloxy-tricyclo[7.4.0.03,8]tridecanes optionally having 2-hydrocarbyl (C1-10) substitutions. Thus, 2-methacryloyloxy-2-methyltricyclo[7.4.0.03,8]tridecane and its copolymer with 5-methacryloyloxy-3-oxatricyclo[4.2.1.04,8]nonane-2-one were prepd. |      |          |                 |          |
| IT  | <b>460096-52-0P</b><br>RL: IMF (Industrial manufacture); PREP (Preparation)<br>((meth)acryloyloxytricyclotridecanes and polymers for <b>photoresists</b> )   |      |          |                 |          |
| RN  | 460096-52-0 CAPLUS   |      |          |                 |          |
| CN  | INDEX NAME NOT YET ASSIGNED  |      |          |                 |          |
| CM  | 1  |      |          |                 |          |
| CRN | 460096-50-8  |      |          |                 |          |
| CMF | C18 H28 O2   |      |          |                 |          |



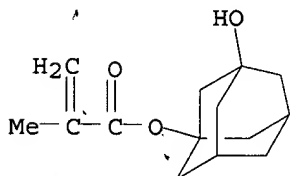
CM 2

CRN 254900-07-7  
CMF C12 H14 O4



CM 3

CRN 115372-36-6  
CMF C14 H20 O3



L6 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2  
ACCESSION NUMBER: 2002:673049 CAPLUS  
DOCUMENT NUMBER: 137:208381  
TITLE: Storage-stable chemically amplified UV positive  
**photoresist** compositions with good  
post-exposure stability for halftone exposure  
INVENTOR(S): Sato, Kenichiro; Kodama, Kunihiro  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 87 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

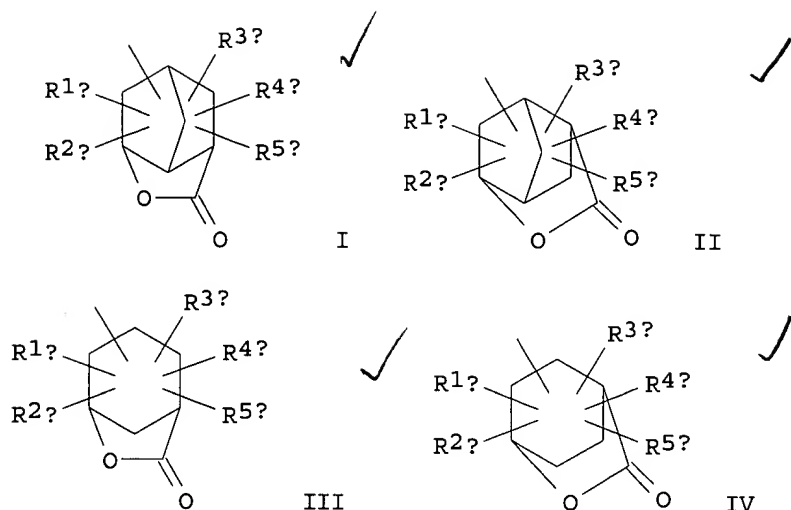
| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| JP 2002251013 | A2   | 20020906 | JP 2001-48880   | 20010223 |

GI

9/6/02

CI

2/23/01



AB The compns. comprise (A) resins contg. alicyclic hydrocarbon groups and groups selected from I, II, III, and IV (R1b, R2b, R3b, R4b, R5b = H, alkyl, cycloalkyl, alkenyl), which increase their alkali soly. by acid decompn. and (B) photoacid generators selected from triarylsulfonium salts, phenacylsulfonium salts, and non-arom. sulfonium salts.

IT 454470-90-7P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(storage-stable chem. amplified UV pos. **photoresists** with good post-exposure stability for halftone exposure)

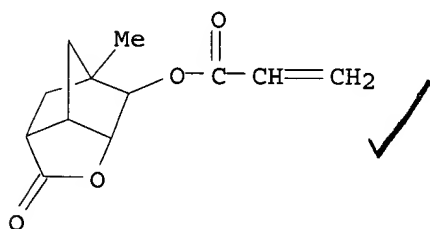
RN 454470-90-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with bicyclo[2.2.1]hept-2-ene, 2,5-furandione, hexahydro-5-methyl-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-propenoate, hexahydro-6-methyl-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-propenoate and hexahydro-6a-methyl-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 392309-90-9

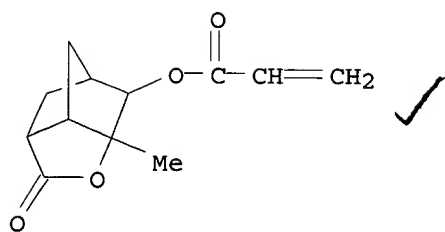
CMF C12 H14 O4



CM 2

CRN 392309-89-6

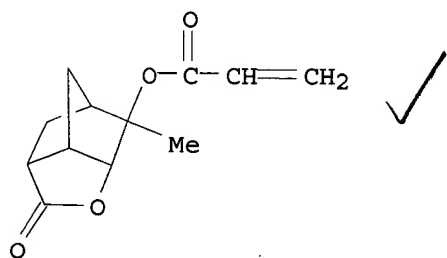
CMF C12 H14 O4



CM 3

CRN 392309-87-4

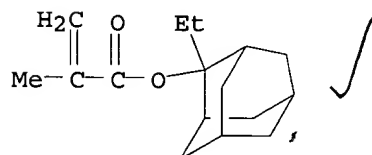
CMF C12 H14 O4



CM 4

CRN 209982-56-9

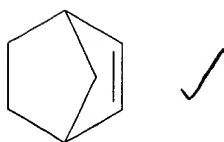
CMF C16 H24 O2



CM 5

CRN 498-66-8

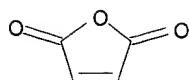
CMF C7 H10



CM 6

CRN 108-31-6

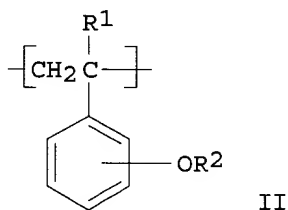
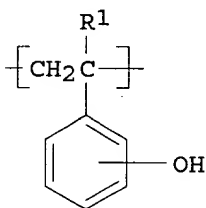
CMF C4 H2 O3



L6 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 3  
 ACCESSION NUMBER: 2002:253088 CAPLUS  
 DOCUMENT NUMBER: 136:286596  
 TITLE: Radiation sensitive resin composition  
 INVENTOR(S): Miyaji, Masaaki; Nagai, Tomoki; Yada, Yuji; Numata, Jun; Nishimura, Yukio; Yamamoto, Masafumi; Ishii, Hiroyuki; Kajita, Toru; Shimokawa, Tsutomu  
 PATENT ASSIGNEE(S): JSR Corporation, Japan  
 SOURCE: Eur. Pat. Appl., 71 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE     |
|---|------|----------|------------------|----------|
| EP 1193558  | A2   | 20020403 | EP 2001-122213   | 20010917 |
| EP 1193558  | A3   | 20020814 |                  |          |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO |      |          |                  |          |
| JP 2002202604   | A2   | 20020719 | JP 2000-401302   | 20001228 |
| JP 2002162746   | A2   | 20020607 | JP 2001-280035   | 20010914 |
| US 2002058201   | A1   | 20020516 | US 2001-953941   | 20010918 |
| PRIORITY APPLN. INFO.:  |      |          | JP 2000-282689 A | 20000918 |
|   |      |          | JP 2000-401302 A | 20001228 |

GI



AB A chem. amplified radiation sensitive resin compn. comprises a specific copolymer and a photoacid generator, wherein the copolymer contains the recurring unit I and/or II and CH<sub>2</sub>CR<sub>1</sub>(C:O)NR<sub>3</sub>R<sub>4</sub> (R<sub>1</sub> = H, Me; R<sub>2</sub> = C<sub>4</sub>-10 tertiary alkyl; R<sub>3,4</sub> = H, C<sub>1</sub>-12 alkyl, C<sub>6</sub>-15 arom., C<sub>1</sub>-12 alkoxy, or R<sub>3</sub> and R<sub>4</sub> may form, in combination and together with the nitrogen atom with which the R<sub>3</sub> and R<sub>4</sub> groups bond, a C<sub>3</sub>-14 cyclic structure, provided that R<sub>3</sub> and R<sub>4</sub> are not a hydrogen atom at the same time). The compn. effectively responds to various radiations, exhibits excellent resoln. and pattern configuration and minimal iso-dense bias, and can form fine patterns at a high precision and in a stable manner.

IT 406198-73-0P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (resin; radiation sensitive resin compn. for photoresist contg.)

RN 406198-73-0 CAPLUS

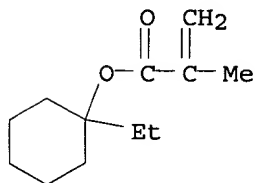
CN 2-Propenoic acid, 2-methyl-, polymer with N,N-dimethyl-2-propenamide, 1-ethylcyclohexyl 2-methyl-2-propenoate and hexahydro-2-oxo-3,5-methano-2H-

cyclopenta[b]furan-6-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 274248-09-8

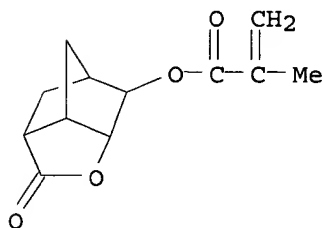
CMF C12 H20 O2



CM 2

CRN 254900-07-7

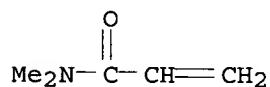
CMF C12 H14 O4



CM 3

CRN 2680-03-7

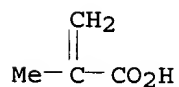
CMF C5 H9 N O



CM 4

CRN 79-41-4

CMF C4 H6 O2



L6 ANSWER 4 OF 7 USPATFULL

ACCESSION NUMBER: 2002:112468 USPATFULL

TITLE: Radiation-sensitive resin composition

INVENTOR(S): Miyaji, Masaaki, Yokkaichi, JAPAN

Nagai, Tomoki, Yokkaichi, JAPAN



Yada, Yuji, Yokkaichi, JAPAN  
 Numata, Jun, Yokkaichi, JAPAN  
 Nishimura, Yukio, Yokkaichi, JAPAN  
 Yamamoto, Masafumi, Yokkaichi, JAPAN  
 Ishii, Hiroyuki, Yokkaichi, JAPAN  
 Kajita, Toru, Yokkaichi, JAPAN  
 Shimokawa, Tsutomu, Suzuka, JAPAN

5/16/02  
 9/18/01

|                     | NUMBER         | KIND | DATE     |
|---------------------|----------------|------|----------|
| PATENT INFORMATION: | US 2002058201  | A1   | 20020516 |
| APPLICATION INFO.:  | US 2001-953941 | A1   | 20010918 |

(9)

|                       | NUMBER   | DATE     |
|-----------------------|--|----------|
| PRIORITY INFORMATION: | JP 2000-282689   | 20000918 |
|                       | JP 2000-401302   | 20001228 |
| DOCUMENT TYPE:        | Utility  |          |
| FILE SEGMENT:         | APPLICATION  |          |
| LEGAL REPRESENTATIVE: | Supervisor, Patent Prosecution Services, PIPER MARBURY<br>RUDNICK & WOLFE LLP, 1200 Nineteenth Street, N.W.,<br>Washington, DC, 20036-2412 |          |
| NUMBER OF CLAIMS:     | 14   |          |
| EXEMPLARY CLAIM:      | 1  |          |
| LINE COUNT:           | 3791   |          |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A chemically amplified radiation-sensitive resin composition comprising a specific copolymer and a photoacid generator, wherein the copolymer contains the following recurring unit (1) and/or the recurring unit (2), and the recurring unit (3-1), ##STR1##

wherein R.sup.1 is a hydrogen or methyl, R.sup.2 is a C.sub.4-10 tertiary alkyl, R.sup.3 and R.sup.4 are a hydrogen, C.sub.1-12 alkyl, C.sub.6-15 aromatic, C.sub.1-12 alkoxy, or R.sup.3 and R.sup.4 may form, in combination and together with the nitrogen atom with which the R.sup.3 and R.sup.4 groups bond, a C.sub.3-15 cyclic structure, provided that R.sup.3 and R.sup.4 are not a hydrogen atom at the same time. The composition effectively responds to various radiations, exhibits excellent resolution and pattern configuration and minimal iso-dense bias, and can form fine patterns at a high precision and in a stable manner.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 406198-73-0P

(resin; radiation sensitive resin compn. for photoresist contg.)

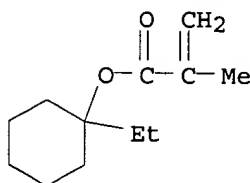
RN 406198-73-0 USPATFULL

CN 2-Propenoic acid, 2-methyl-, polymer with N,N-dimethyl-2-propenamide, 1-ethylcyclohexyl 2-methyl-2-propenoate and hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 274248-09-8

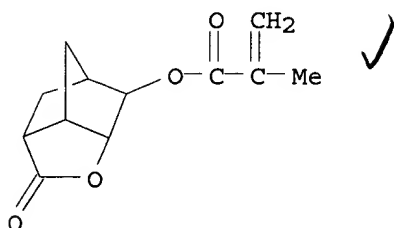
CMF C12 H20 O2



CM 2

CRN 254900-07-7

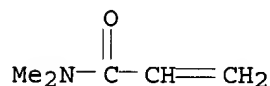
CMF C12 H14 O4



CM 3

CRN 2680-03-7

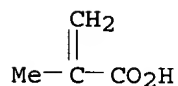
CMF C5 H9 N O



CM 4

CRN 79-41-4

CMF C4 H6 O2



L6 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2002 ACS

DUPLICATE 4

ACCESSION NUMBER: 2001:280498 CAPLUS

DOCUMENT NUMBER: 134:318676

TITLE: Positive-working far-UV-sensitive **photoresist** composition containing acid-sensitive resin having lactone group

INVENTOR(S): Aogo, Toshiaki; Sato, Kenichiro; Kodama, Kunihiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 58 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

|    | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---|------|----------|-----------------|----------|
|    | -----   | ---- | -----    | -----           | -----    |
|    | JP 2001109154   | A2   | 20010420 | JP 1999-285762  | 19991006 |
| AB | The title compn. contains a photoacid generator and a resin, which increases the soly. towards an alkali developer reacting with an acid, of a lactone repeating group. The compn., which contains the acid-sensitive resin having lactone group, shows the high sensitivity and provides the |      |          |                 |          |

pattern of the high resolu., the good contact with substrate, and little edge roughness.

IT 335163-68-3P, 2-Methyl-2-adamantylmethacrylate-Bicyclo[2.2.1]heptane-2-carboxylic acid, 7-hydroxy-, .gamma.-lactone, 5-exo-methacrylate ester copolymer  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(pos.-working far-UV-sensitive **photoresist** compn.)

RN 335163-68-3 CAPLUS

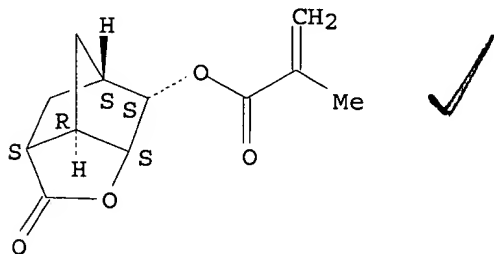
CN 2-Propenoic acid, 2-methyl-, (3S,3aR,5S,6S,6aS)-hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl ester, polymer with 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 335163-67-2

CMF C12 H14 O4

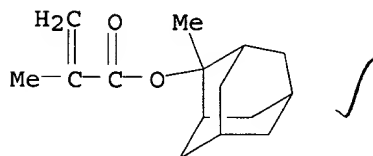
Relative stereochemistry.



CM 2

CRN 177080-67-0

CMF C15 H22 O2



L6 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2002 ACS

DUPLICATE 5

ACCESSION NUMBER: 2001:747251 CAPLUS

DOCUMENT NUMBER: 135:296190

TITLE: Chemically amplified positive **resist** composition

INVENTOR(S): Uetani, Yasunori; Yamada, Airi; Miya, Yoshiko; Takata, Yoshiyuki

PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan

SOURCE: Eur. Pat. Appl., 18 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND DATE

APPLICATION NO. DATE

|  |               |                     |                           |            |
|--|---------------|---------------------|---------------------------|------------|
| EP 1143299   | A1            | 20011010            | EP 2001-107747            | 20010402   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO |               |                     |                           |            |
| CN 1316675   | A             | 20011010            | CN 2001-110230            | 20010402   |
| <del>US 2001044070</del>   | <del>A1</del> | <del>20011122</del> | <del>US 2001-824227</del> | 20010403   |
| JP 2002296783  | A2            | 20021009            | JP 2001-104302            | 20010403   |
| PRIORITY APPLN. INFO.:   |               |                     | JP 2000-101868            | A 20000404 |
|  |               |                     | JP 2000-133328            | A 20000502 |
|  |               |                     | JP 2000-209505            | A 20000711 |
|  |               |                     | JP 2001-14261             | A 20010123 |

\* 4/3/01

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB A chem. amplification type pos. **resist** compn. comprises an acid generating agent and a resin having polymeric units (A), (B) and (C). The polymeric unit (A) is an alicyclic lactone selected from polymeric units I and II (R1,2 = H, Me; and n = 1-3). The polymeric unit (B) is selected 3-hydroxy-1-adamantyl (meth)acrylate represented by III, IV (R3 = H, methyl; R4 = H, hydroxyl; R5,6 = H, C1-3 alkyl or hydroxyalkyl, etc.) and a unit derived from unsatd. dicarboxylic acid anhydride selected from maleic anhydride and itaconic anhydride and a polymeric unit of (.alpha.) .beta.-(meth)acryloyloxy-.gamma.-butyrolactone represented by V (R7 = H, Me). The polymeric unit (C) is the one which becomes alkali-sol. by cleavage of a part of groups by the action of an acid. The pos. **resist** compn. of this invention is excellent in balance of properties such as resoln., profile, sensitivity, dry etching resistance, adhesion, and the like.

IT 364736-27-6P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(chem. amplified pos. **resist** compn. contg.)

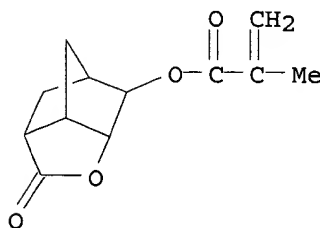
RN 364736-27-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-methyl-2-propenoate, 3-hydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate and tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 254900-07-7

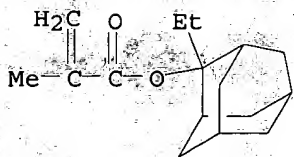
CMF C12 H14 O4



CM 2

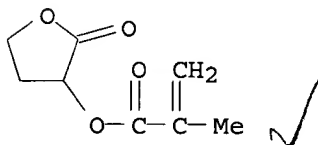
CRN 209982-56-9

CMF C16 H24 O2



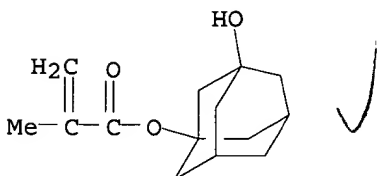
CM 3

CRN 195000-66-9  
CMF C8 H10 O4



CM 4

CRN 115372-36-6  
CMF C14 H20 O3



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 7 OF 7 USPATFULL

ACCESSION NUMBER: 2001:212076 USPATFULL

TITLE: Chemically amplified positive resist composition

INVENTOR(S): Uetani, Yasunori, Osaka, Japan  
Yamada, Airi, Osaka, Japan  
Miya, Yoshiko, Muko-shi, Japan  
Takata, Yoshiyuki, Osaka, Japan

|                     | NUMBER         | KIND | DATE         |
|---------------------|----------------|------|--------------|
| PATENT INFORMATION: | US 2001044070  | A1   | 20011122     |
| APPLICATION INFO.:  | US 2001-824227 | A1   | 20010403 (9) |

|                       | NUMBER         | DATE     |
|-----------------------|----------------|----------|
| PRIORITY INFORMATION: | JP 2000-101868 | 20000404 |
|                       | JP 2000-133328 | 20000502 |
|                       | JP 2000-209505 | 20000711 |

DOCUMENT TYPE: Utility  
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: BIRCH STEWART KOLASCH & BIRCH, PO BOX 747, FALLS  
CHURCH, VA, 22040-0747

NUMBER OF CLAIMS: 5  
EXEMPLARY CLAIM: 1  
LINE COUNT: 894

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A chemical amplification type positive **resist** composition  
excellent in balance of properties such as resolution, profile,  
sensitivity, dry etching resistance, adhesion and the like which  
comprises a resin which has the following polymeric units (A), (B) and  
(C); and an acid generating agent.

(A): At least one polymeric unit of an alicyclic lactone selected from  
polymeric units represented by the following formulae (Ia) and (Ib):  
##STR1##

(B): At least one polymeric unit selected from a polymeric unit of  
3-hydroxy-1-adamantyl (meth)acrylate represented by the following  
formula (II), a polymeric unit of a combination of a unit represented by  
the following formula (III) and a unit derived from unsaturated  
dicarboxylic acid anhydride selected from maleic anhydride and itaconic  
anhydride and a polymeric unit of (.alpha.) .beta.- (meth)acryloyloxy-  
.gamma.-butyrolactone represented by the following formula (IV):  
##STR2##

(C) A polymeric unit which becomes alkali-soluble by cleavage of a part  
of groups by the action of an acid.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 364736-27-6P, 2-Ethyl-2-adamantyl methacrylate-3-hydroxy-1-  
adamantyl methacrylate-5-methacryloyloxy-2,6-norbornanecarbolactone-  
.alpha.-methacryloyloxy-.gamma.-butyrolactone copolymer  
(chem. amplified pos. resist compn. contg.)

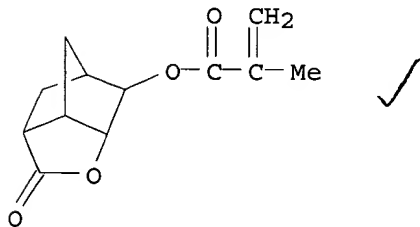
RN 364736-27-6 USPATFULL

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl  
2-methyl-2-propenoate, 3-hydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl  
2-methyl-2-propenoate and tetrahydro-2-oxo-3-furanyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 254900-07-7

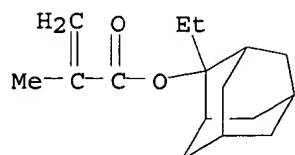
CMF C12 H14 O4



CM 2

CRN 209982-56-9

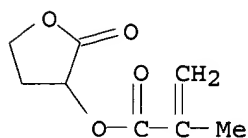
CMF C16 H24 O2



CM 3

CRN 195000-66-9

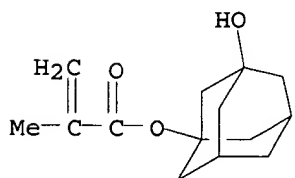
CMF C8 H10 O4



CM 4

CRN 115372-36-6

CMF C14 H20 O3



=>

L11 ANSWER 1 OF 3 USPATFULL

ACCESSION NUMBER: 2002:16787 USPATFULL  
TITLE: Positive photoresist composition  
INVENTOR(S): Sato, Kenichiro, Shizuoka, JAPAN  
Aoai, Toshiaki, Shizuoka, JAPAN

*Present Appl.*

*1/24/02  
4-16-01*

|                     | NUMBER         | KIND | DATE     |
|---------------------|----------------|------|----------|
| PATENT INFORMATION: | US 2002009666  | A1   | 20020124 |
| APPLICATION INFO.:  | US 2001-834639 | A1   | 20010416 |

(9)

|                       | NUMBER         | DATE     |
|-----------------------|----------------|----------|
| PRIORITY INFORMATION: | JP 2000-115497 | 20000417 |
|                       | JP 2000-215574 | 20000717 |
|                       | JP 2000-231670 | 20000731 |

DOCUMENT TYPE: Utility  
FILE SEGMENT: APPLICATION  
LEGAL REPRESENTATIVE: SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC, 2100  
Pennsylvania Avenue, N.W., Washington, DC, 20037

NUMBER OF CLAIMS: 18  
EXEMPLARY CLAIM: 1  
LINE COUNT: 1642

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Provided is a positive photoresist composition comprising a resin which contains specific repeating units and whose dissolving rate toward an alkaline developing solution is increased by the action of an acid and a compound which generates an acid upon irradiation with an actinic ray or a radiation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 392309-94-3P

(acid-decomposable resin; pos. photoresist compn. contg.)

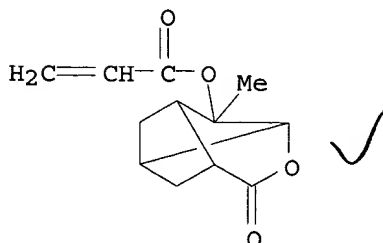
RN 392309-94-3 USPATFULL

CN 2-Propenoic acid, 7-methyl-5-oxo-4-oxatricyclo[4.3.0.0<sup>3,8</sup>]non-7-yl ester, polymer with bicyclo[2.2.1]hept-2-ene, 2,5-furandione, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl 2-propenoate and octahydro-1,4,4,6-tetramethyl-1H-5,8a-methanoazulen-6-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 392309-93-2

CMF C12 H14 O4

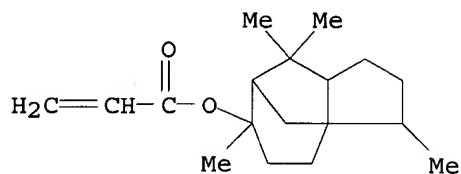


CM 2

CRN 313698-62-3

CMF C18 H28 O2

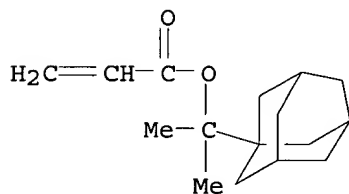




CM 3

CRN 300833-10-7

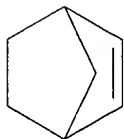
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CM 4

CRN 498-66-8

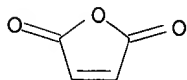
CMF C7 H10



CM 5

CRN 108-31-6

CMF C4 H2 O3



L11 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 2002:72739 CAPLUS  
 DOCUMENT NUMBER: 136:142610  
 TITLE: Positive photoresist composition  
 INVENTOR(S): Sato, Kenichiro; Aoi, Toshiaki  
 PATENT ASSIGNEE(S): Japan  
 SOURCE: U.S. Pat. Appl. Publ., 49 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

*present  
app*

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE       |
|------------------------|------|----------|-----------------|------------|
| US 2002009666          | A1   | 20020124 | US 2001-834639  | 20010416   |
| JP 2001296661          | A2   | 20011026 | JP 2000-115497  | 20000417   |
| JP 2002031890          | A2   | 20020131 | JP 2000-215574  | 20000717   |
| JP 2002040662          | A2   | 20020206 | JP 2000-231670  | 20000731   |
| PRIORITY APPLN. INFO.: |      |          | JP 2000-115497  | A 20000417 |
|                        |      |          | JP 2000-215574  | A 20000717 |
|                        |      |          | JP 2000-231670  | A 20000731 |

AB Provided is a pos. photoresist compn. comprising a resin which contains specific repeating units and whose dissolving rate toward an alk. developing soln. is increased by the action of an acid and a compd. which generates an acid upon irradiation with an actinic ray or a radiation. The present invention relates to pos. photoresist compn. used in an ultramicroolithog. process, e.g., for the prodn. of VLSI and high capacity microchips processes.

IT 392309-94-3P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acid-decomposable resin; pos. photoresist compn. contg.)

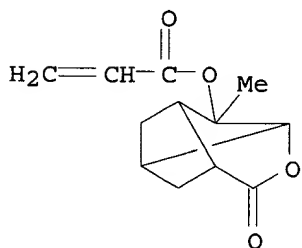
RN 392309-94-3 CAPLUS

CN 2-Propenoic acid, 7-methyl-5-oxo-4-oxatricyclo[4.3.0.0<sup>3,8</sup>]non-7-yl ester, polymer with bicyclo[2.2.1]hept-2-ene, 2,5-furandione, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl 2-propenoate and octahydro-1,4,4,6-tetramethyl-1H-5,8a-methanoazulen-6-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 392309-93-2

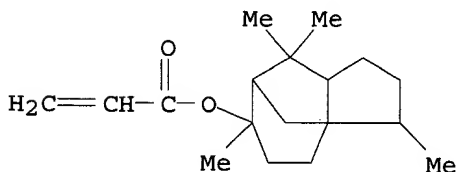
CMF C12 H14 O4



CM 2

CRN 313698-62-3

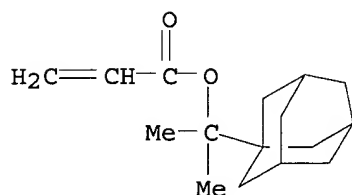
CMF C18 H28 O2



CM 3

CRN 300833-10-7

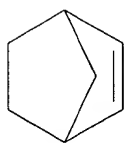
CMF C16 H24 O2



CM 4

CRN 498-66-8

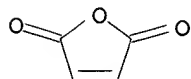
CMF C7 H10



CM 5

CRN 108-31-6

CMF C4 H2 O3



L11 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:72739 HCAPLUS

DOCUMENT NUMBER: 136:142610

TITLE: Positive photoresist composition

INVENTOR(S): Sato, Kenichiro; Aoai, Toshiaki

PATENT ASSIGNEE(S): Japan

SOURCE: U.S. Pat. Appl. Publ., 49 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| US 2002009666 | A1   | 20020124 | US 2001-834639  | 20010416 |
| JP 2001296661 | A2   | 20011026 | JP 2000-115497  | 20000417 |
| JP 2002031890 | A2   | 20020131 | JP 2000-215574  | 20000717 |
| JP 2002040662 | A2   | 20020206 | JP 2000-231670  | 20000731 |

PRIORITY APPLN. INFO.:  
JP 2000-115497 A 20000417  
JP 2000-215574 A 20000717  
JP 2000-231670 A 20000731

AB Provided is a pos. photoresist compn. comprising a resin which contains specific repeating units and whose dissolving rate toward an alk. developing soln. is increased by the action of an acid and a compd. which

*present  
app.*

generates an acid upon irradiation with an actinic ray or a radiation. The present invention relates to positive photoresist compounds used in an ultramicrolithography process, e.g., for the production of VLSI and high capacity microchip processes.

IT 392309-94-3P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acid-decomposable resin; positive photoresist compound, continuing.)

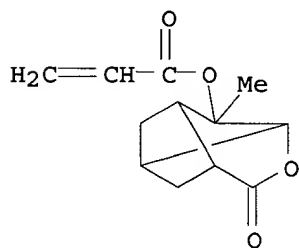
RN 392309-94-3 HCAPLUS

CN 2-Propenoic acid, 7-methyl-5-oxo-4-oxatricyclo[4.3.0.0<sup>3,8</sup>]non-7-yl ester, polymer with bicyclo[2.2.1]hept-2-ene, 2,5-furandione, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl 2-propenoate and octahydro-1,4,4,6-tetramethyl-1H-5,8a-methanoazulen-6-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 392309-93-2

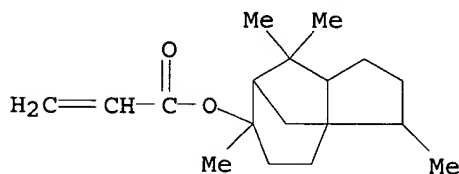
CMF C12 H14 O4



CM 2

CRN 313698-62-3

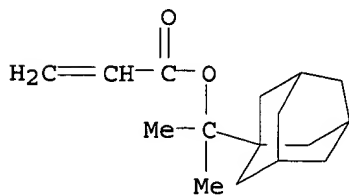
CMF C18 H28 O2



CM 3

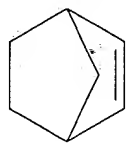
CRN 300833-10-7

CMF C16 H24 O2



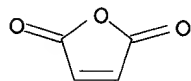
CM 4

CRN 498-66-8  
CMF C7 H10



CM 5

CRN 108-31-6  
CMF C4 H2 O3



=> d 117 1 ibib abs hitstr

L17 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:708833 HCAPLUS

TITLE: Chemical compounds for **photoresists** and resin compositions for **photoresists**

INVENTOR(S): Tsutsumi, Kiyoharu; Itokazu, Teruo

PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

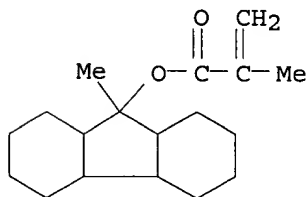
PATENT INFORMATION:

|    | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|----|--|------|----------|-----------------|----------|
|    | JP 2002265530  | A2   | 20020918 | JP 2001-62435   | 20010306 |
| AB | The compds. are 2-(meth)acryloyloxy-tricyclo[7.4.0.03,8]tridecanes optionally having 2-hydrocarbyl (C1-10) substitutions. Thus, 2-methacryloyloxy-2-methyltricyclo[7.4.0.03,8]tridecane and its copolymer with 5-methacryloyloxy-3-oxatricyclo[4.2.1.04,8]nonane-2-one were prepd. |      |          |                 |          |
| IT | <b>460096-52-0P</b><br>RL: IMF (Industrial manufacture); PREP (Preparation)<br>(meth)acryloyloxytricyclotridecanes and polymers for <b>photoresists</b> )  |      |          |                 |          |
| RN | 460096-52-0 HCAPLUS  |      |          |                 |          |
| CN | INDEX NAME NOT YET ASSIGNED  |      |          |                 |          |

CM 1

CRN 460096-50-8

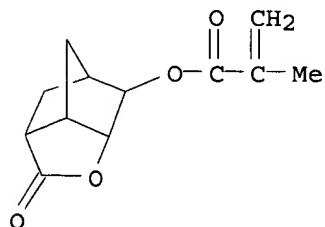
CMF C18 H28 O2



CM 2

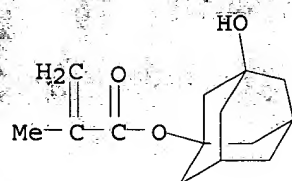
CRN 254900-07-7

CMF C12 H14 O4

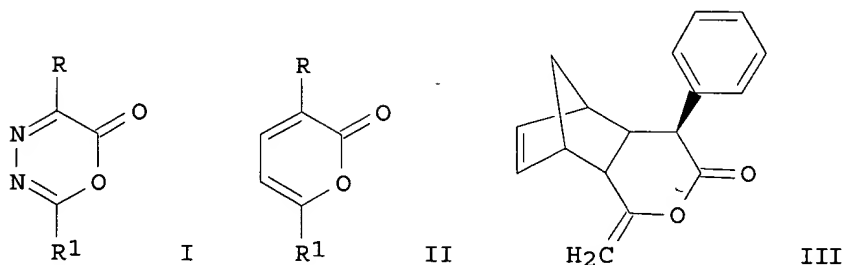


CM 3

CRN 115372-36-6  
CMF C14 H20 O3



ACCESSION NUMBER: 1996:296125 CAPLUS  
DOCUMENT NUMBER: 125:86434  
TITLE: Cycloadditions of 6H-1,3,4-oxadiazin-6-ones  
(4,5-diaza-.alpha.-pyrones). Part 15. Reactions of  
6H-1,3,4-oxadiazin-6-ones with norbornadiene. A new  
route to 3,6-disubstituted .alpha.-pyrones  
AUTHOR(S): Christl, Manfred; Bodenschatz, Gabriele; Fenineis,  
Erich; Hegmann, Joachim; Huettner, Gerhard;  
Mertelmeyer, Stefan; Schaetzlein, Klaus  
CORPORATE SOURCE: Institut Organische Chemie, Universitaet Wuerzburg,  
Wuerzburg, D-97074, Germany  
SOURCE: Liebigs Annalen (1996), (5), 853-861  
CODEN: LANAEM; ISSN: 0947-3440  
PUBLISHER: VCH  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 125:86434  
GI



AB The oxadiazinones I (R = Me, Ph, 4-C<sub>6</sub>H<sub>4</sub>OMe, 4-C<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>, CHMe<sub>2</sub>; R<sub>1</sub> = CO<sub>2</sub>Me, Ph, 4-C<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>, 4-C<sub>6</sub>H<sub>4</sub>Br, Me) were converted into the .alpha.-pyrones II upon reaction with norbornadiene. For this purpose, solns. of the substrates were treated with BF<sub>3</sub>.Et<sub>2</sub>O or F<sub>3</sub>CCO<sub>2</sub>H. The smooth formation of .alpha.-pyrones was also obsd. when a .gamma.-oxo ketene, initially generated by heating a soln. of the substrates in the absence of BF<sub>3</sub>.Et<sub>2</sub>O was allowed to react with the Lewis acid. Without acid, only II (R = 4-C<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>, R<sub>1</sub> = Ph) was obtained free from further compds., whereas in the other cases enol lactones and 1:2 products were formed addnl. Oxadiazinone I (R = Ph, R<sub>1</sub> = Me) gave enol lactone III in the noncatalyzed reaction.

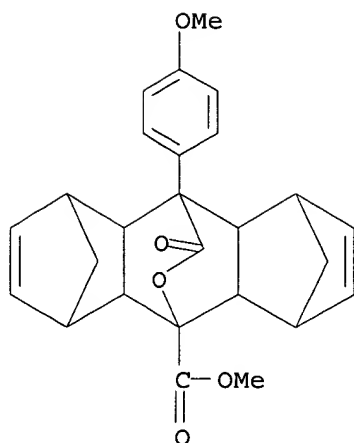
IT 178413-65-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of .alpha.-pyrones by Diels-Alder reaction of oxadiazinones  
with norbornadiene)

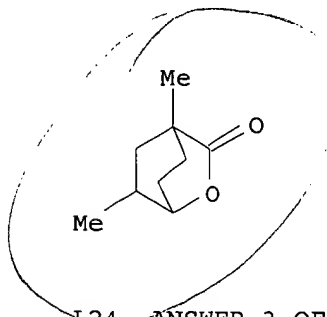
RN 178413-65-5 CAPLUS

CN 10,9-(Epoxyethano)-1,4:5,8-dimethanoanthracene-10(1H)-carboxylic acid,  
4,4a,5,8,8a,9,9a,10a-octahydro-9-(4-methoxyphenyl)-12-oxo-, methyl ester,  
(1.alpha.,4.alpha.,4a.beta.,5.alpha.,8.alpha.,8a.beta.,9.alpha.,9a.beta.,1  
0.alpha.,10a.beta.)- (9CI) (CA INDEX NAME)

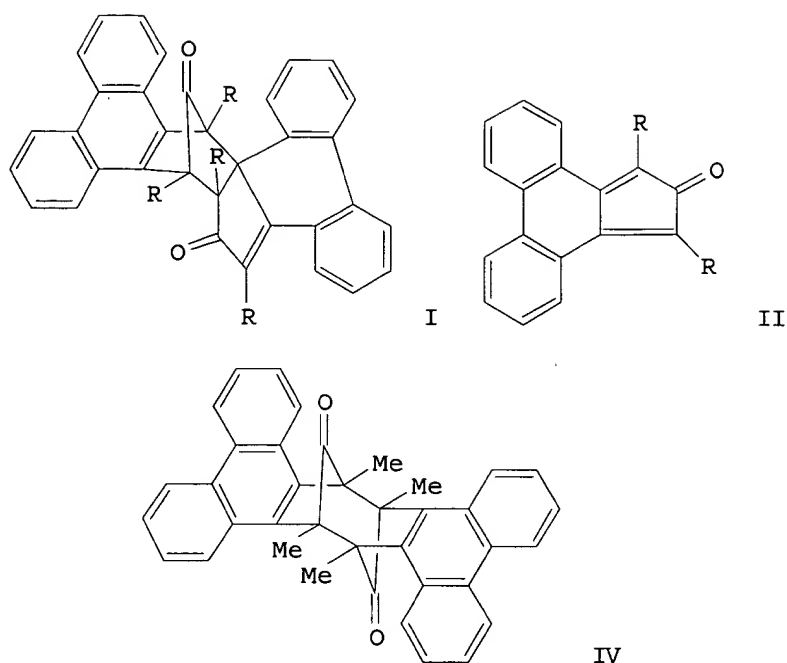




L24 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2  
 ACCESSION NUMBER: 1980:214496 CAPLUS  
 DOCUMENT NUMBER: 92:214496  
 TITLE: Hydrochlorination and lactonization of  
 3-cyclohexenecarboxylic acid. II. Reactions of  
 1-methyl- and 1,2-, 1,3-, 1,4-, and  
 1,5-dimethyl-3-cyclohexenecarboxylic acids  
 AUTHOR(S): Ismailov, A. G.; Rustamov, M. A.; Akhmedov, A. A.  
 CORPORATE SOURCE: Azerb. Politekh. Inst., Baku, USSR  
 SOURCE: Zh. Org. Khim. (1980), 16(1), 68-73  
 CODEN: ZORKAE; ISSN: 0514-7492  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 AB The regiochem. and stereochem. of the title reactions were examd. The  
 conformation of the starting material influenced the product compn.  
 IT 73683-62-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 73683-62-2 CAPLUS  
 CN 2-Oxabicyclo[2.2.2]octan-3-one, 4,6-dimethyl- (9CI) (CA INDEX NAME)



L24 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 3  
 ACCESSION NUMBER: 1977:484712 CAPLUS  
 DOCUMENT NUMBER: 87:84712  
 TITLE: o-Quinonoid compounds. Part 12. Diels-Alder  
 additions to 1,3-dimethylcyclopenta[1]phenanthren-2-  
 one  
 AUTHOR(S): Jones, David W.  
 CORPORATE SOURCE: Dep. Org. Chem., Univ. Leeds, Leeds, Engl.  
 SOURCE: J. Chem. Soc., Perkin Trans. 1 (1977), (9), 980-7  
 CODEN: JCPRB4  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI



AB Trapping expts. with N-phenylmaleimide, 1-phenyltriazoline-2,5-dione, and cyclopentadiene showed that the Diels-Alder dimer I (R = Me) of 1,3-dimethylcyclopenta[1]phenanthren-2-one (II; R = Me) is in rapid equil. with II (R = Me) at 20.degree. but no color accompanied dimer dissocn. Endo addn. of nonconjugated dienophiles is more important for II (R = Me) than for 2,5-dimethyl-3,4-diphenylcyclopentadienone (III) supporting the view that steric effects assocd. with noncoplanar Ph groups in III impede endo addn. Thermolysis or photolysis of II (R = Me) gave the formal [4 + 4].pi. dimer IV. II (R = Et) also exists as the dissocg. [4 + 2].pi. dimer I (R = Et) but II (R = Me<sub>2</sub>CH) is a sterically stabilized monomer which shows the same reactivity towards dienophiles as I (R = Me). The NMR spectra of I (R = Me, Et) are rationalized in terms of a Cope rearrangement.

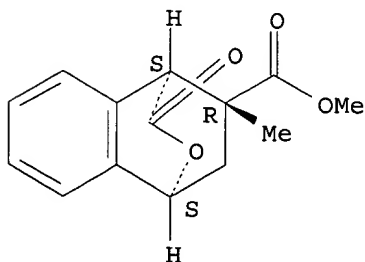
IT **63902-29-4P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 63902-29-4 CAPLUS

CN 1,4-Ethano-1H-2-benzopyran-9-carboxylic acid, 3,4-dihydro-9-methyl-3-oxo-, methyl ester, (1.alpha.,4.alpha.,9S\*)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



ACCESSION NUMBER: 1968:114143 CAPLUS  
DOCUMENT NUMBER: 68:114143  
TITLE: Highly condensed polycyclic systems. I.  
Tetra-cyclo[6.4.0.04,12.05.9]dodec-10-enes  
AUTHOR(S): Akhtar, I. A.; Fray, Gordon I.; Yarrow, J. M.  
CORPORATE SOURCE: Univ. Bristol, Bristol, Engl.  
SOURCE: J. Chem. Soc. C (1968), (7), 812-15  
CODEN: JSOOAX  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
GI For diagram(s), see printed CA Issue.  
AB Generation of the bicyclo[6.4.0]dodeca-4,9,11-triene system from  
cis,cis-cycloocta-1,5-diene, using tetracyclone, 1,2,3,4-tetrachloro-5,5-  
dimethoxycyclopentadiene, or .alpha.-pyrone, is followed by an intramol.  
Diels-Alder reaction and results in the formation of  
tetracyclo[6.4.0.04,12.05,9]dodec-10-enes (I).  
IT **18326-48-2P**  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)  
RN 18326-48-2 CAPLUS  
CN 4,3,7-[1]Propanyl[3]ylidenecyclopenta[b]pyran-7a(2H)-carboxylic acid,  
3-chlorohexahydro-2-oxo-, methyl ester (8CI) (CA INDEX NAME)

